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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,389	03/31/2004	Patrick Chiu	FXPL-1093US0	7581

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EXAMINER	
MOHR, ERIC JOHN	
ART UNIT	**PAPER NUMBER**
4181	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/815,389	CHIU ET AL.	
	Examiner	Art Unit	
	Eric J. Mohr	4181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because figures 15, 16, and 17 appear to have been damaged in transmission. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 refers to a three-dimensional shape being a rectangle. A rectangle is a two-dimensional shape.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Averbuch et al (US 7,085,401).

Consider claim 1, Averbuch discloses a method for finding a region of high importance in a video **(see abstract describing object extraction in color video)**, comprising: finding regions of interest **(see column 20, lines 11-18 where possible foreground candidates are marked)**; assigning pixel values to the pixels within the regions of interest **(see column 21, lines 25-26 where the decision that an area is of interest is assigned to all pixel values inside the region)**; constructing groups from the pixels having pixel values **(see column 24, lines 4-28 describing grouping pixels regions into an object)**; and merging pixel groups to generate regions of high

importance **(see column 25, line 54 to column 26, line 23 describing a step by step process of merging pixel groupings)**.

Consider claim 4, Averbuch discloses assigning each pixel a magnitude within a predetermined range **(see column 19, lines 58-60 where pixels are assigned a value in a range between 0 and 255)**.

Consider claim 5, Averbuch discloses a pixel value range of zero to one where each pixel is assigned a magnitude of one if it has a higher than average magnitude **(see column 19, lines 9-15 describing generating a binary image based on an adaptive threshold)**.

Consider claim 6, Averbuch discloses quantizing the pixel values as either having a value of zero or one **(see column 19, lines 9-15 describing generating a binary image based on an adaptive threshold)**.

Consider claim 7, Averbuch discloses forming a group of neighboring pixels that have a magnitude within a first range **(see column 20, line 56 to column 21, line 45 where a windowing function creates a group of pixels which are labeled if their magnitudes meet a threshold)**.

Consider claim 8, Averbuch discloses neighboring pixels being within 1 pixel from each other **(see column 21, lines 26-30 where a 3x3 window is described, each pixel being 1 away from the widow center)**.

Consider claim 9, Averbuch discloses the first range being higher than average magnitude **(see column 20, line 56 to column 21, line 45 where a windowing**

function creates a group of pixels which are labeled if their magnitudes meet a threshold).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Averbuch as applied to claim 1 above, and further in view of Divakaran et al (US 6,697,523).

Consider claim 2, Averbuch discloses the method of claim 1 wherein segments of a video clip are used **(see column 18, line 35-36 where Averbuch describes using any number of frames from a video)**. Averbuch does not explicitly disclose determining a portion of each clip that has a higher than average kinetic energy. Divakaran discloses a method in which a video is first partition into shots **(see column 5, line 45-47)** then determining the relative intensity of motion for each frame of each shot **(see column 5, lines 54-50)**.

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Averbuch, and modify the process of breaking the video into clips to include a measure of the clip energy, as taught by Divakaran, thus

indicating the difficulty to summarize each clip, as discussed by Divakaran **(see column 3, lines 15-22)**.

Consider claim 3, Divakaran discloses that the average kinetic energy can be determined using pixel luminance values **(see column 2, lines 11-13 describing the use of color features, and column 3, lines 23-30 correlating motion activity to change in color characteristics)**.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Averbuch as applied to claim 1 above, and further in view of Sekiguchi et al (US 5,553,207).

Consider claim 10, Averbuch discloses the method of claim 1 where pixels are merged into groups **(see column 25, line 54 to column 26, line 23 describing a step by step process of merging pixel groupings)**. Averbuch does not explicitly disclose merging the pixels into a larger group in the shape of a predetermined three-dimensional shape. Sekiguchi discloses concatenating regions of interest in three dimensions **(see column 4, line 56 to column 5, line 14)**.

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Averbuch, and modify the group merging to include groups in three-dimensions, as taught by Sekiguchi, thus allowing reliable extraction of three-dimentional regions, as discussed by Sekiguchi **(see column 2, lines 7-27)**.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Averbuch in view of Sekiguchi as applied to claim 10 above, and further in view of Watanabe et al (US 6,999,069).

Sekiguchi discloses concatenating regions into three-dimensional areas **(see column 4, line 56 to column 5, line 14)**. Sekiguchi does not explicitly disclose the predetermined three-dimensional shape being rectangle. Watanabe discloses extracting regions of multiple three-dimensional shapes, including rectangular parallelepipeds **(see column 4, lines 56-67)**.

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Averbuch, and modify the creating of three dimenionsal shapes to be a rectangular parallelepiped, as taught by Watanabe, thus enhancing ease or operation for extracting image portions, as discussed by Watanabe **(see column 3, lines 63-65)**.

7. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Averbuch in view of Sekiguchi as applied to claim 10 above, and further in view of Simanovsky et al (US 6,026,143).

Consider clain 12, Sekiguchi discloses concatenating regions into three-dimensional areas **(see column 4, line 56 to column 5, line 14)**. Sekiguchi does not explicitly disclose merging groups of pixels that meet a minimum energy density threshold. Simanovsky discloses grouping regions that have a density within a predetermined range **(see column 5, lines 63-67)**.

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Sekiguchi, and modify the region merging to include use of an energy density threshold, as taught by Simanovsky, thus better identifying thin objects, as discussed by Simanovsky **(see column 6, lines 7-10)**.

Consider claim 13, Sekiguchi discloses concatenating regions into three-dimensional areas **(see column 4, line 56 to column 5, line 14)**. Sekiguchi does not explicitly disclose merging groups of pixels that meet a minimum volume threshold. Simanovsky discloses comparing an object grouping volume to a threshold **(see column 5, line 67 to column 6, line 5)**.

It would have been obvious to one skilled in the art at the time the invention was made to modify the invention of Sekiguchi, and modify the region merging to include use of a volume density threshold, as taught by Simanovsky, thus better identifying thin objects, as discussed by Simanovsky **(see column 6, lines 7-10)**.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric J. Mohr whose telephone number is (571) 270-5140. The examiner can normally be reached on 7:30am-5pm M-Th, 7:30am-4pm Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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